Crestron PROCISE™ PSPHD

PROCISE™
Residential

High-Definition Professional Surround Sound Processor

Experience World-Class Surround Sound Performance — In Any Room!

It's a rare event when an audio product comes along that captures all the senses, inspiring discerning audiophiles, movie enthusiasts, and professional theater designers alike. Meet the PROCISE™ PSPHD — the ultimate high-definition surround sound processor for high-end home entertainment and custom theater installations.

"PROCISE delivers pure, mind-blowing sonic performance wrapped in a strikingly handsome package — with impeccable specs to back it all up — plus brilliant new design innovations never before seen in a surround sound processor."

No other audio processor does so much to maximize the impact of all your digital and analog sources within the unique acoustical environment of your home theater, living room, or master suite. Whatever the shape of the room or its materials and furnishings, whether using the most expensive, esoteric speakers or something more modest, the PSPHD has the intelligence to propel your listening experience to a new pinnacle of auditory gratification.

With its propriety combination of advanced features and innovative new technologies, the PSPHD fulfills the myriad design challenges and performance expectations of the high-end custom market.

AUDYSSEY MULTEQ XT DYNAMIC VOLUME · HDMI™ · dts-HD Master Audio · DOLBY TRUEHD

Your Room…Perfected!—Your home is your castle, and whatever your choice of entertainment, you should be able to enjoy world-class cinema sound quality in whatever room you choose. Whether you're a movie junkie, extreme sports fan, ultimate gamer, or music purist, with PROCISE you can enjoy high-end audio in any room — whether it's an acoustically optimized custom home theater or untreated living room.

Exacting speaker calibration is enabled in the PSPHD using patented Audyssey MultEQ® XT technology[1]. With MultEQ XT, every seat in the room becomes the best seat in the house. MultEQ XT replaces hours of tedious measurements using expensive sound analyzers, arriving at a far superior result in minimal time. Employing the same room correction technology used to tune commercial theater sound systems worldwide, PROCISE provides up to 32 measurement points for precise room compensation.

MultEQ XT solves the problem of distortion caused by room acoustics, capturing sound information in the time domain to evaluate not only the frequency

QUICK TOUR

7.3 HD surround sound processing—Delivers the ultimate multi-channel experience with enveloping surround sound and uniform deep bass coverage employing multiple subwoofers

Audyssey MultEQ® XT precision automatic room compensation—Maximizes your speaker system's performance within your acoustical space

HDMI™ Connectivity—Provides the essential transport for 7.1 surround sound and 1080p HD video

Studio grade performance—Three floating-point DSPs and 24-bit 96kHz A-D/D-As achieve articulate, life-like sound with extreme dynamic range and ultra low noise down to 125 dB SNR

Dolby® TrueHD, Dolby Digital Plus, and DTS-HD Master Audio™—Supports the latest lossless 7.1 surround sound audio formats to get the most from Blu-ray Disc™ and other high-definition media

Dynamic EQ®—Assures consistent bass response, tonal balance and soundstage at any volume

Dynamic Volume™—Provides a more sophisticated approach to solving the problem of radically fluctuating volume levels

Pure mode—Bypasses all signal processing to provide a pure signal path for critical listening

QuickSwitch HD digital switching—Achieves fast, fluid switching of HDMI audio and video

Smart HDCP Management—Industry-leading support for HDCP ensures the most reliable handling of digital HD content, and compatibility with the widest range of devices

Discrete output channel signal processing—Affords independent fine adjustment of every individual speaker and subwoofer

2-Channel Signal Steering—Lets you alternately route stereo audio to the surround, rear, or all speakers for better party music

Downmix outputs—Provides mono and stereo output signals to feed additional listening zones

Copious connectivity—Furnishes an incredible 30 inputs including HDMI, AES/EBU, S/PDIF optical and coaxial; plus mono, stereo, and multichannel analog

XLR Balanced Inputs/Outputs—Ensures a quieter, more reliable analog interface to professional-grade amplifiers, powered subwoofers, and source components

PROAMP automatic amplifier pairing—Allows unprecedented integration between preamp and amplifier for seamless control and monitoring

Integrated Line Mixer—Affords a whole new level of flexibility for interfacing with doorbells and phone ringers, paging and teleconferencing equipment

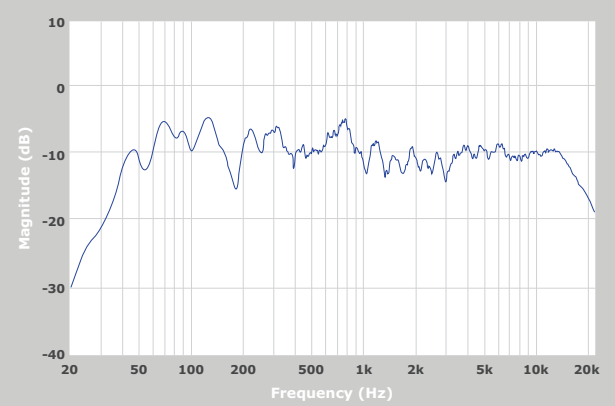
Native Crestron® control—Enables virtually unlimited customization for touch-panel control and automation as part of a complete Crestron control system

Crestron PROCISE Tools software—Affords extensive configuration and fine adjustment via USB or Ethernet

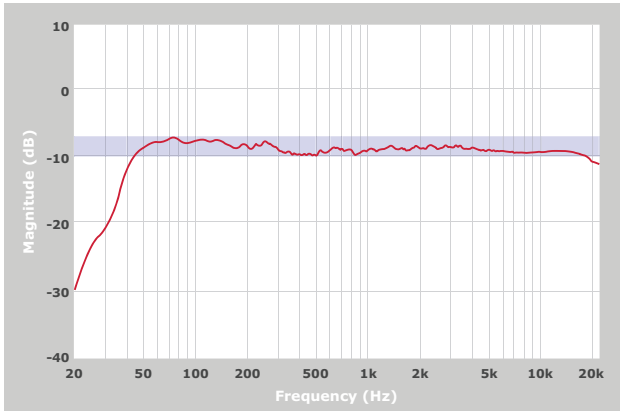
DigitalMedia™ system integration—Melds seamlessly into a Crestron DigitalMedia whole-house distribution system via HDMI and Ethernet

High-end Appearance—Features a stunning milled aluminum front panel with clean, uncomplicated controls and selectable visual feedback for a look befitting the finest showcase theater or luxury living room

response, but reflections in the audio path that affect time of arrival and cause distortion. With this information, MultEQ XT adjusts the settings for each speaker to perfection — including equalization, crossovers points, and time delays. The result is a superb soundstage with accurate tonal balance, exquisite imaging, and deeper, more defined bass.



Typical loudspeaker response (above), measured at one point in a room. Peaks and dips are caused by interactions with surfaces and furniture. A smooth, flat response curve (below) is achieved at every seat in the room using the PROCISE PSPHD with Audyssey MultEQ XT technology.



Crestron highly recommends the use of the Audyssey MultEQ XT feature on the PSPHD to take full advantage of this exciting technology.

Bass Beyond Compare—Tremendous bass is essential to the enjoyment of today's movies, music, and video games. The PSPHD reaches an explosive new "low," providing three independently controllable subwoofer outputs and advanced bass management. Support for multiple subwoofers greatly enhances the quality of deep bass in a large room, effectively canceling room resonances so bass is distributed more evenly.

Uniquely flexible, the PSPHD allows you to adjust the level, crossover, EQ, and delay settings independently for each subwoofer, either manually or automatically through MultEQ XT. Engaging the "Bass Reinforcement" feature allows the full low-frequency range to be routed to your main left and right speaker pair for even greater bass coverage. The end game is shockingly realistic low frequency effects and tight, gripping, defined bass at every seat.

A Refined Listening Experience—Let's face it, there's a time and place for the jarring impact of loud effects and sudden volume swells. For your daily television viewing or late night movie watching, these fluctuations can become an annoyance – especially given the inconsistent levels of your typical TV commercials. Audyssey Dynamic Volume™ and Dynamic EQ® solve this issue, letting you enjoy clear, rich, enveloping sound from all your media sources at any listening level.

Dynamic Volume intelligently monitors the volume of program material moment-by-moment, maintaining the desired listening level for all content while optimizing dynamic range to preserve the overall excitement. Dynamic EQ works in conjunction with MultEQ XT, providing sophisticated loudness correction to solve the problem of deteriorating sound quality as volume is decreased, taking into account both human perception and room acoustics. Together, these refinements help to maximize your enjoyment without sudden volume bursts taking your head off or disturbing the neighbors.

PROCISE adds one more refinement to help ensure consistent levels when switching between sources. Every audio input on the PSPHD includes a dedicated input compensation adjustment, allowing the installer to match the average signal level from each TV receiver, disc player, media server, and game console in your system.

A Harmonious Pair—The PROCISE PSPHD and its companion PROAMP amplifier possess the unique ability to operate as one, affording functionality unattainable from any other preamp/amp combination. Naturally, the PROAMP delivers a robust supply of power to compel any 7-channel speaker system to its utmost performance. (It looks pretty awesome with the PSPHD as well.) But also, through a simple Ethernet connection, the two components become paired, enabling seamless control and monitoring of the amplifier through the PSPHD's front panel without any need for a control system. Even the output level of each amp channel is conveyed on the face of the PSPHD via analog style meters.

As part of a complete Crestron® control system, this pairing streamlines programming while allowing for sophisticated remote control including the ability to view the detailed status of each amp channel from a Crestron touchpanel.

Please refer to the PROAMP spec sheet for additional information.

Professional, Precise…PROCISE!—Especially in today's elaborate home theaters with all their sound deadening materials, electronic noise and distortion is the last thing you want to hear. To this end, PROCISE has been designed to produce pristine, accurate audio — and nothing more. Our engineers employed three separate floating-point DSPs and high-performance 24-bit 96kHz converters to achieve exceptional dynamic range and extremely low noise. So, even during the quietest moments of a high-resolution film soundtrack or original master recording, you'll be enveloped in studio-silent ambiance, every nuance revealed, so when the sound comes up you'll be convinced you're a part of it.

The Ins and The Outs—One glance at its back panel reveals the incredible amount of connectivity the PSPHD offers to handle a vast arsenal of sources. Its six HDMI inputs provide the essential connections for all your high-definition AV sources, including Blu-ray Disc™ and DVD players, HDTV receivers, and multi-media computers. HDMI is the key to handling 7.1 digital surround sound signals including high bit-rate lossless audio formats like DTS-HD Master Audio™ and Dolby® TrueHD, and also allows for switching of high-definition video up to 1080p60 with Deep Color, and computer resolutions up to WUXGA (1920x1200).

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Additional digital audio inputs include four optical and six coaxial S/PDIF inputs, plus professional AES/EBU to support very high-end studio and broadcast equipment. Your analog components are also supported via eight RCA unbalanced stereo inputs, one XLR balanced stereo input, and an eight-channel surround sound input.

A choice of XLR balanced or RCA unbalanced outputs provides high-performance connectivity to drive the PROAMP High-Definition Professional Surround Sound Amplifier, or any other amplifier(s) with up to 7 channels. Additional balanced and unbalanced outputs are provided to drive up to three powered subwoofers. Still further balanced and unbalanced outputs are included to feed additional listening zones or recording equipment, with independent mono and stereo feeds each carrying an unprocessed downmix of the entire surround sound signal.

A single HDMI output provides a connection for your high-def display or projector, eliminating the need for a separate video switcher. This output also carries a stereo downmix of the main surround output, perfect for sharing audio and video from the theater with the rest of your house via a Crestron DigitalMedia™ system.

Worry-Free HD—To ensure compatibility with the widest range of HD content and components, Crestron equipped the PSPHD with the most advanced HDCP management of any signal processor in its class. At setup, every connected HDMI device is authenticated and its key allowances verified, immediately revealing any limitations in the system. This lets the installer reconfigure the system before problems start, eliminating the surprise of a sudden loss of sound and picture caused by some HDCP-encrypted or non-compliant source.

Why does HDCP matter?
As the move to digital takes hold, more and more content providers are using HDCP (High-bandwidth Digital Content Protection) to protect their DVDs, Blu-ray Discs, broadcast signals, and online content against unauthorized copying. Analog connectivity, which can't support HDCP, is being eliminated from the computers and AV equipment being sold today, and soon content providers will be taking full advantage of the new digital technology to ensure only authorized users may view their content in all its high-definition glory. Systems that don't support HDCP simply won't let you display all this HD content.

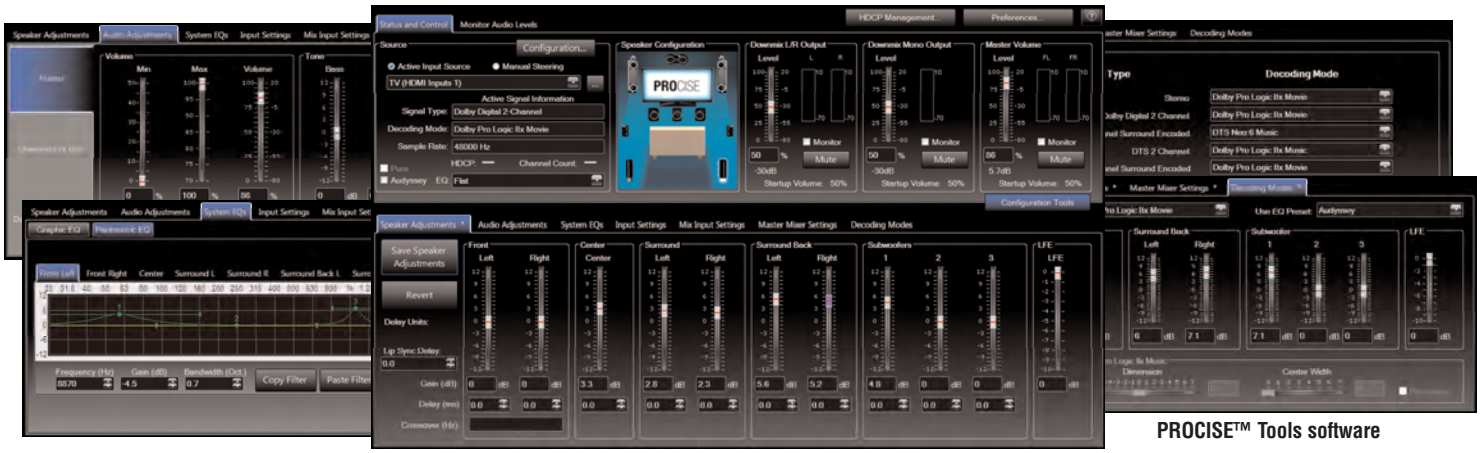
Input selection on the PSPHD is fast and fluid thanks to Crestron exclusive QuickSwitch HD technology. QuickSwitch HD maintains a constant HDCP connection with each HDMI device in the system, eliminating the need to re-authenticate each time a different source is selected, ensuring uninterrupted switching between all sources.

The Full Frontal—What was the thing you noticed when you first saw the PSPHD? Was it the clean, inviting controls, the modern metallic accents, or its high-resolution graphic displays? Unlike other audio processors, setting up and operating the PSPHD from the front panel is a pleasure. Touch any button to awaken it, and easily select your source and make adjustments with a simple turn and tap of the left selection knob. Detailed information appears on the front panel to eliminate any confusion. Jump directly to key menus using the dedicated function buttons. And, oh yeah, select the bargraph analyzer or retro-style analog meters to lend a classic touch for monitoring signal status. And by all means, turn up that knob on the right whenever you want to impress your guests with more volume.

PROCISE™ Tools—While much of the PSPHD's initial setup and configuration can be accomplished through its front panel, PROCISE Tools software provides the optimum user interface for accessing all of its audio adjustments and settings. And, although MultEQ XT does most of the work to optimize your system's sound quality, there is plenty of customization and tweaking available to those so inclined. For instance, PROCISE Tools allows you to fine-tune lip-sync delay, define the default decoding and EQ modes for each source, set up the mix inputs, monitor signal levels, and finesse the various level, crossover, delay, and other settings.

To those who prefer to make all their own EQ adjustments, either globally or for a specific input or surround mode (in lieu of MultEQ XT), PROCISE Tools offers a choice of master 6-band graphic EQ or ten independent channels of precision 6-band parametric EQ. Each EQ mode allows five presets to be saved, which can be recalled via a control system or set to correspond with any input or decoding mode.

The Beauty of Simplicity—The wonderful thing about Crestron is, once the system's installed and all the critical adjustments are made, all you need to worry about is your choice of movie and popcorn. As part of a complete Crestron system, all the technology within the PSPHD disappears behind the scenes, with only the controls you want and need provided to you on your choice of Crestron touchpanel or handheld remote.



PROCISE™ Tools software

SPECIFICATIONS

Audio – General

Features: 27 selectable source inputs plus built-in noise generator, 7.1 Dolby® Digital/DTS® surround sound decoder, 7.3 multi-channel signal processing and steering, Audyssey MultEQ® XT, Audyssey Dynamic Volume™, Audyssey Dynamic EQ®, 6-band graphic or parametric EQ, 100 ms lip-sync/speaker delay, unprocessed "Pure" mode (analog sources only), independent mono and stereo downmix outputs, 3 channel line mixer (post surround decoder/processor) with independent speech-optimized signal processing, HDCP management, Crestron QuickSwitch HD
Input Signal Types: HDMI supporting HD lossless multi-channel up to 7.1 with HDCP, DisplayPort Multimode[1], S/PDIF (coaxial and optical), AES/EBU, analog 2-channel (balanced and unbalanced), analog 8-channel (unbalanced), analog mono (balanced or unbalanced)
Output Signal Types: Analog 7.3 channel (balanced and unbalanced), analog 2-channel downmix (balanced and unbalanced), analog mono downmix (balanced and unbalanced), HDMI w/2-channel downmix
Processor: Three floating-point DSPs
Analog-To-Digital Conversion: 24-bit 96 kHz
Digital-To-Analog Conversion: 24-bit 96 kHz
Frequency Response: 20 Hz to 20 kHz ±0.2 dB
THD+N: 0.002% digital in to analog out, 0.003% analog in to analog out
S/N Ratio: 125dB AES/EBU in to balanced out, 122dB SPDIF/HDMI in to balanced out, 118dB AES in to unbalanced out, 114dB SPDIF/HDMI in to unbalanced out, 109dB analog in to analog out

Audio – Surround Sound

Decoding Modes: None, Stereo, Dolby Pro Logic IIx Movie, Dolby Pro Logic IIx Music, DTS Neo:6 Cinema, DTS Neo:6 Music, Two Channel Steering – Surround, Two Channel Steering – Rear, Multi-Channel Stereo (Party), Cathedral, Hall, Stadium, Jazz Club, Dolby Digital®, Dolby Digital EX, Dolby Digital Plus, Dolby® TrueHD, DTS®, DTS-ES Matrix, DTS-ES Discrete, DTS 96/24, DTS-HD Master Audio™, PCM Multi-Channel, Multi-Channel Input
Master Volume Level: -80 to +20 dB, adjustable from 0% to 100%, plus mute
Speaker Levels: ±12.0 dB per output (Front L/R, Surround L/R, Back L/R, Center, Sub 1-3)
Low Frequency Effects (LFE): -10.0 to +0.0 dB
Decoding Mode Speaker Levels: ±12.0 dB per output
Decoding Mode LFE Level: -10.0 to +0.0 dB
Input Compensation: ±10.0 dB per input
Bass Control: ±12.0 dB
Treble Control: ±12.0 dB
EQ Modes: Audyssey MultEQ XT, 6-band graphic (global), or 6-band parametric (per output)
GEQ Center Frequencies: 63, 250, 1k, 4k, 10k, 20k Hz
GEQ Gain: ±12.0 dB per band
GEQ Presets: 1 thru 5
PEQ Center Frequency: 25 to 20,000 Hz per band
PEQ Gain: ±12.0 dB per band
PEQ Bandwidth: 0.0 to 3.0 octaves per band
PEQ Presets: 1 thru 5
Crossover Frequency: Large (full range) or 40 to 200 Hz, adjustable in 10Hz steps, per output (excluding subs)
Delay: 0 to 100 ms lip-sync (global), 0 to 20 ms speaker distance compensation (per output); adjustable in milliseconds, feet, or meters; NOTE: 100 ms max per output lip-sync and speaker delay combined
Compression: Off, Audyssey Dynamic Volume (Heavy, Medium, Light), Dolby/DTS DRC (Heavy, Medium, Light), Dolby TrueHD Auto
Loudness Compensation: None or Audyssey Dynamic EQ (available only with MultEQ XT active)
DTS Neo:6 Music Settings: CGain 0.0 to 1.0, Standard or Wide mode
Dolby Pro Logic IIx Music Settings: Dimension ±7, Center Width 0 to 7, Standard or Panorama

Audio – Downmix

L/R Output Level: -80dB to +20dB, adjustable from 0% to 100%, plus mute
Mono Output Level: -80dB to +20dB, adjustable from 0% to 100%, plus mute
Bass Control: ±12.0 dB per output
Treble Control: ±12.0 dB per output

Audio – 3-Channel Input Mixer

Mix Level: -80.0 to 0.0 dB per channel (Mix 1-3), per output (Front L/R, Surround L/R, Back L/R, Center, Stereo Downmix, Mono Downmix)
Input Compensation: ±10.0 dB per input
EQ Mode: 4-band graphic plus 2 notch filters (per input)
GEQ Center Frequencies: 160, 500, 1.2k, 3k Hz
GEQ Gain: ±12.0 dB per band
Notch Filter Frequency: 20 to 20,2000 Hz per filter
Notch Filter Width: 0.020 to 3.500 octaves per filter
Dynamics Processing: Gating and compression (per input)
Dynamics Pre-Process Level: ±12.0 dB
Gating Level (Threshold): 0-100%
Gating Depth (Attenuation): 0.0 to 80.0 dB
Gating Attack: 0 to 100 ms
Gating Decay (Release): 0 to 5000 ms
Compression Level (Threshold): -80.0 to +20.0 dB
Compression Ratio: 1.0:1 to 10.0:1
Compression Attack: 0.1 to 300.0 ms
Compression Release: 1 to 1000 ms
Compression Curve: Hard or soft knee
Dynamics Post-Process Level: ±12.0 dB
Mixer Input Presets: 1 thru 30

Audio – Master Mixer

Program Level: -80.0 to 0.0 dB plus mute per output group (Main, Stereo Downmix, Mono Downmix)
Mixer Level: -80.0 to 0.0 dB plus mute per channel (Mix 1-3), per output group (Main, Stereo Downmix, Mono Downmix)
Master Mixer Presets: 1 thru 10

Video

Features: 6x1 digital switcher, audio breakaway, HDCP management, resolution management, Crestron QuickSwitch HD
Input Signal Types: HDMI, DVI[2], DisplayPort Multimode[2]
Output Signal Types: HDMI, DVI[2]
Formats: HDMI w/Deep Color, DVI, HDCP v.1.2 content protection support
Input Resolutions, Progressive: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, plus any other resolution allowed by HDMI up to 165MHz pixel clock
Input Resolutions, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI up to 165MHz pixel clock
Output Resolutions: Matched to inputs

Communications

Ethernet: For control, console, and pairing with PROAMP; 10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP
Cresnet: For control and console, Cresnet slave
USB: For console, USB 1.1 client
HDMI: Passes CEC and EDID, supports HDCP v.1.2, provides HDCP key management

Connectors

DIGITAL SOURCES (optical) 1 – 4: (4) JIS F05 female (TOSLINK) optical fiber connectors S/PDIF optical digital audio inputs

DIGITAL SOURCES (coaxial) 1 – 6: (6) RCA female, S/PDIF coaxial digital audio inputs
Input Impedance: 75 Ohms
Input Level: 0.5 Vrms nominal

AES/EBU: (1) 3-pin XLR female, AES/EBU digital audio input
Input Impedance: 110 Ohms
Input Level: 0.6 Vrms nominal

HDMI INPUT 1 – 6: (6) 19-pin Type A HDMI female, HDMI digital audio/video inputs

HDMI OUTPUT: (1) 19-pin Type A HDMI female, HDMI digital audio/video output; audio stream is a 2-channel downmix of the surround sound audio signal (pre master mixer)

ANALOG SOURCES L/R 1 – 8: (16) RCA female comprising (8) unbalanced stereo line-level audio inputs;

Input Impedance: 11k Ohms
Maximum Input Level: 2 Vrms

MULTI-CHANNEL SOURCE FRONT L/R, SURROUND L/R, BACK L/R, CENTER, SUB:
(8) RCA female, unbalanced line-level 7.1 surround sound audio input;
Input Impedance: 11k Ohms
Maximum Input Level: 2 Vrms

BALANCED STEREO L/R: (2) 3-pin XLR female, balanced stereo line-level audio input
Input Impedance: 22k Ohms balanced
Maximum Input Level: 4 Vrms
Note: For use with balanced source only

MIXER INPUT 1 – 3: (3) 3-pin 3.5mm detachable terminal blocks
Balanced/unbalanced line-level inputs
Input Impedance: 22k Ohms balanced, 11k Ohms unbalanced
Maximum Input Level: 4 Vrms balanced/unbalanced

OUTPUT (unbalanced) LEFT, RIGHT, SURR L., SURR R., SURR BL., SURR BR., CENTER, SUB 1, SUB 2, SUB 3: (10) RCA female
Unbalanced line-level 7.3 surround sound audio output
Output Impedance: 100 Ohms
Maximum Output Level: 4 Vrms

OUTPUT (balanced) LEFT, RIGHT, SURR L., SURR R., SURR BL., SURR BR., CENTER, SUB 1, SUB 2, SUB 3: (10) 3-pin XLR male
Balanced line-level 7.3 surround sound audio output
Output Impedance: 200 Ohms
Maximum Output Level: 8 Vrms

DOWNMIX OUT (unbalanced) LEFT/RIGHT: (2) RCA female
Unbalanced line-level stereo audio output
Output Impedance: 100 Ohms
Maximum Output Level: 4 Vrms

DOWNMIX OUT (balanced) LEFT/RIGHT: (2) 3-pin XLR male
Balanced line-level 7.3 surround sound audio output
Output Impedance: 200 Ohms
Maximum Output Level: 8 Vrms

DOWNMIX OUT (unbalanced) MONO: (1) RCA female
Unbalanced line-level mono audio output
Output Impedance: 100 Ohms
Maximum Output Level: 4 Vrms

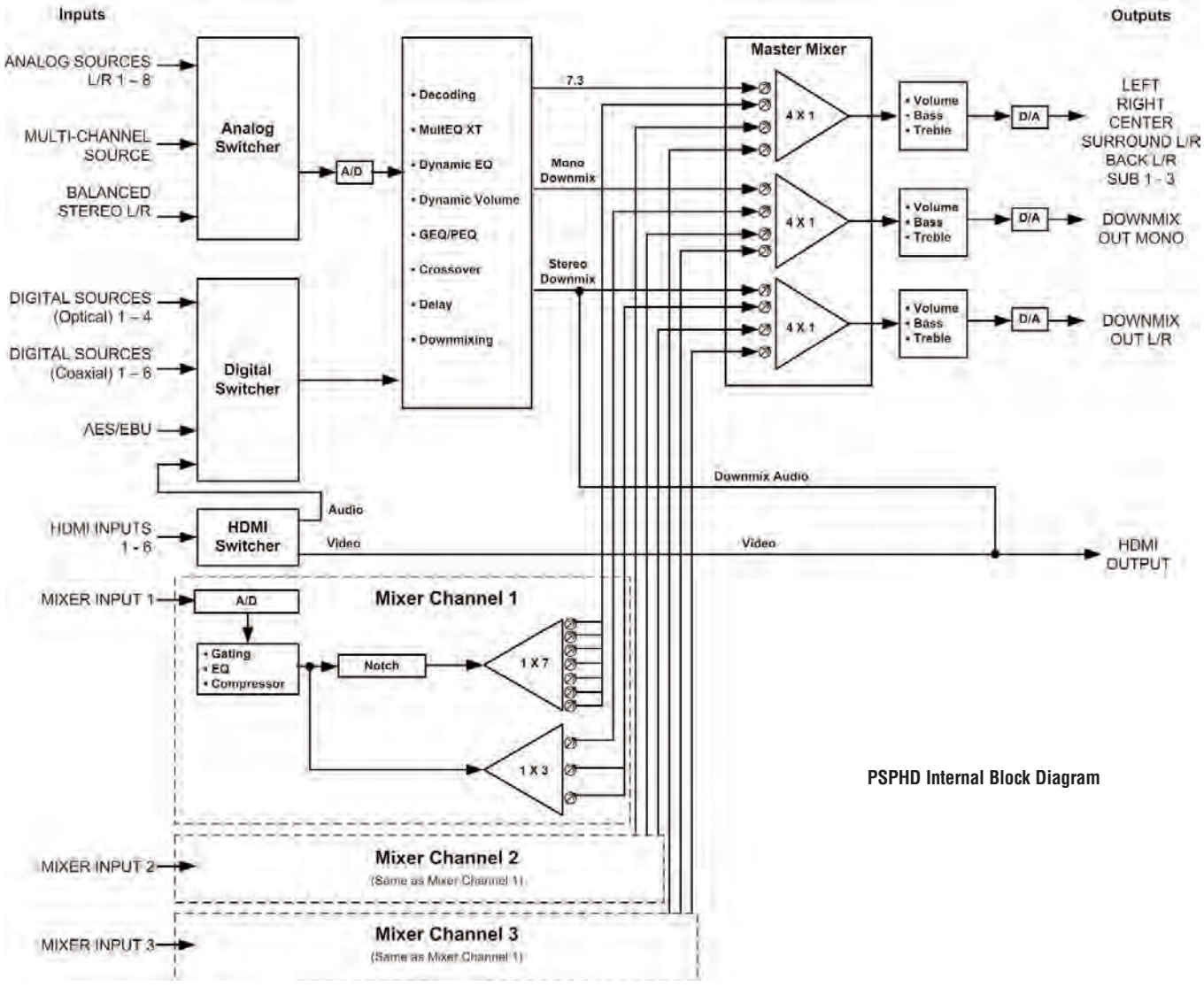
DOWNMIX OUT (balanced) MONO: (1) 3-pin XLR male
Balanced line-level 7.3 surround sound audio output
Output Impedance: 200 Ohms
Maximum Output Level: 8 Vrms

LAN: (1) 8-wire RJ45 with 2 LED indicators, 10/100BaseT Ethernet port
Green LED indicates link status, amber LED indicates Ethernet activity

NET: (2) 4-pin 3.5mm detachable terminal blocks, Cresnet slave ports, paralleled

100-240V~50/60Hz 55W: (1) IEC C14 male chassis plug
Mates with removable power cord (included)

G: (1) 6-32 screw, chassis ground lug



PSPHD Internal Block Diagram

Microphone (front): (1) 3-pin mini-XLR, female (behind front panel); input for calibrated microphone (part of CSSTK Surround Sound Tuning Kit, sold separately)

USB (front): (1) USB Type B female (behind front panel)
USB 1.1 computer console port (cable included)

Displays

(2) 256 x 64 graphic VFDs (Vacuum Fluorescent Displays)
Left display shows source, decoding mode, setup, info, and installer menus
Right display shows volume levels
Both displays can show real-time analog meters or spectrum analyzers

Controls & Indicators

Selection Knob (left): (1) rotary encoder with integral pushbutton, used to navigate and select various menu options and adjust values
STANDBY: (1) pushbutton and red LED, places PSPHD (and PROAMP if connected) into "Standby" mode (all outputs turned off)
SOURCE: (1) pushbutton, enters the source selection menu
MODE: (1) pushbutton, enters the decoding mode selection menu
SETUP: (1) pushbutton, enters the compression and equalization setup menu
INFO: (1) pushbutton, enables display of source information
HOME: (1) pushbutton, returns both displays to their default screens showing the current source and decoding mode (left) and volume (right)
DISPLAY: (1) pushbutton, normally sets the front panel display brightness; pressing DISPLAY and HOME simultaneously for 5 seconds enters the installer menu
METER: (1) pushbutton, enables dual analog meter display
SPECTRUM: (1) pushbutton, enables dual spectrum analyzer display
LEVEL: (1) pushbutton, enables display of speaker volume levels
AMPLIFIER: (1) pushbutton, enables display of amplifier status (if PROAMP is connected)
Volume Knob (right): (1) rotary encoder with integral pushbutton, turn to adjust master volume level, press to display master volume level
MUTE: (1) pushbutton and red LED, mutes all outputs
RESET: (1) miniature pushbutton (behind front panel), hardware reset
SETUP (rear): (1) recessed miniature pushbutton and (1) red LED, used for touch-settable ID (TSID) in conjunction with Crestron Toolbox™ software

Power Requirements

Main Power: 65 Watts @ 100-240 Volts AC, 50/60 Hz
Cresnet Power Usage: none, does not draw Cresnet power

Environmental

Temperature: 41° to 104°F (5° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 225 BTU/Hr

Enclosure

Chassis: Metal, vented sides, ultra-quiet speed-controlled fan cooling
Front Panel: Aluminum with plastic overlay
Mounting: Freestanding or 3U 19-inch rack-mountable (detachable feet and rack ears included)

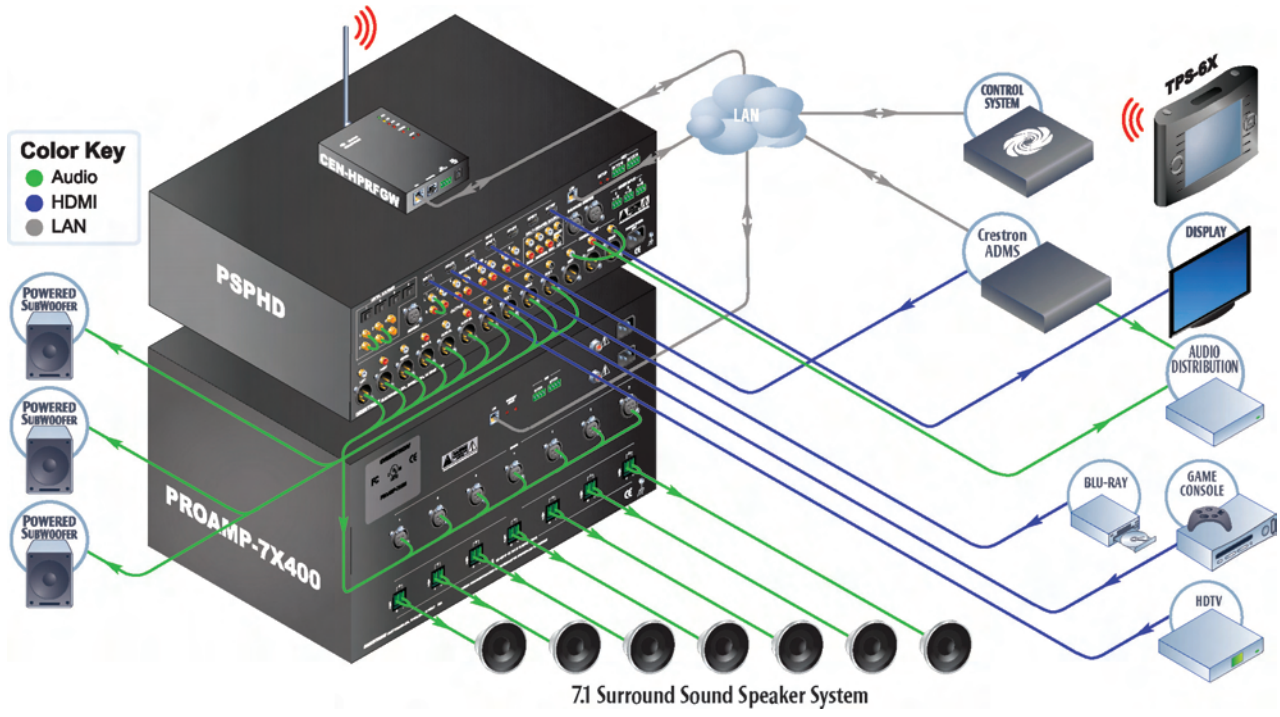
Dimensions

Height: 5.74 in (146 mm), 5.19 (132 mm) without feet
Width: 17.28 in (439 mm), 19.0 in (483 mm) with ears
Depth: 14.75 in (375 mm)

Weight

12.0 lb (5.4 kg)

1. Setup of MultEQ XT is highly recommended for optimum system performance. Requires CSSTK Professional Surround Sound Tuning Kit for setup.
2. HDMI requires an adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. CBL-HD-DVI and CBL-DP-HD interface cables available separately.



PSPHD Typical Residential Application

AVAILABLE ACCESSORIES

PROAMP-7X400
PROCISE™ High-Definition Surround Sound Amplifier, 7 Channels x 400 Watts

PROAMP-7X250
PROCISE™ High-Definition Surround Sound Amplifier, 7 Channels x 250 Watts

CBL Series
Crestron® Certified Interface Cables

CSSTK
Surround Sound Tuning Kit

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